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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/711,959      | 10/15/2004  | Fook-Luen Heng       | BUR920040201US1     | 5958             |

45093 7590 04/17/2007  
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| EXAMINER |
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KIK, PHALLAKA

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2825

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 04/17/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/711,959

Applicant(s)

HENG ET AL.

Examiner

Phallaka Kik

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2007 and 05 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 31-36 is/are pending in the application, *wherein claims 25-30 are canceled*.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 and 31-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action responds to the RCE filed on 4/5/2007 and amendment after-final filed on 3/5/07. Claims 1-24,31-36 are pending, wherein claims 25-30 have been cancelled and claims 1,9,17,31,33,35 have been amended.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/5/2007 has been entered.

#### ***Claim Objections***

3. **Claims 2,5-7,13-16,21-22,32,34,36** are objected to because of the following informalities:

As per **claim 2**, "one problem object is" (line 1) should be --at least two problem objects are-- for proper antecedent basis.

As per **claims 5,13,21,32,34,36**, "one problem object that is" (lines 3, 2-3, 2-3, 3, 2-3, and 3-4 respectively ) should be --at least two problem objects that are-- for proper antecedent basis.

As per **claims 6,14,22**, "one problem object" (line 2) should be --two problem objects-- for proper antecedent basis.

As per **claims 6-7,14-16,22**, the claims are also objected to for incorporating the above errors into the respective claims by claim dependency.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-24,31-36** are rejected under 35 U.S.C. 102(b) as being anticipated by **Hall** (US Patent No. 5,936,868).

As per **claims 1,4,9,12,17,20,31,33,35**, all of the elements of the claims are summarized in col. 3, line 30 to col. 4, line 67, wherein the at least two problem objects (i.e., contacts, vias, polysilicon gates, bond pads, power rails and supply rails) are necessarily identified for which the scaling are applied, which are based on manufacturing process (see col. 3, lines 30-37), wherein the selective scaling steps include determining the particular scaling factor for each problem object, and different scaling technique is applied accordingly (i.e., downsizing or upsizing or particular downsizing/upsizing associated with the particular type of problem objects) using the different or various scaling factors determined or selectively determined for each of the problem object, wherein such scaling factors are technology ground rules and methodology constraints dependent, including the particular compensation, new ground

rule or scaling multiplier as related to the particular manufacturing process being updated or converted to and for which the particular type of objects under consideration; wherein the possible placement and routing are part of the replacement as described in col. 5, lines 1-10, which could involve the conventional art of placement and routing as further described in col. 1, lines 10-67; wherein the since the method is a computer-implemented method (see col. 1, lines 1-67), the system, means, computer program product, computer useable medium, program code are part of the computer-implemented method being necessary to implement the computer implemented method.

As per **claims 2-3,10-11,18-19**, all of the elements of claims 1,9,17 from which the respective claims depend, are discussed in the rejections of claims 1,9,17 above, wherein the object problem object being a layer, region and/or cell to which the corresponding hierarchical scaling program/method is applied is further described in col. 6, lines 28-36, 55-67 and col. 4, lines 32-37.

As per **claims 5-7,13-15,21-23,32,34,36**, all of the elements of claims 1,9,17,31,33,35 from which the respective claims depend, are discussed in the rejections of claims 1,9,17,31,33,35 above, wherein the further step/means for manufacturing, testing manufactured circuit and generating the manufacturing information are further described in col. 9, line 454 to col. 10, line 43.

As per **claims 8,16,24**, all of the elements of claims 1,13,17 from which the respective claims depend, are discussed in the rejections of claims 1,13,17 above, the evaluation step/means is further described at least in col. 9, lines 54-65.

**Remarks**

6. **The rejections of claims 1-24 and 31-36 are rejected under 35 U.S.C. 102(a)** as being anticipated by **Regan** (US Patent No. 6,756,242) are withdrawn in light of Applicant's amendment filed on 9/12/2006, wherein as previously indicated, the method of **Reagan** fails to account for determining a scaling factor for each problem object. However, as given in the above new rejection as being necessitated by Applicant's amendment to the claims, the claims are not patentable over **Hall** (US Patent No. 5,936,868).

7. As per **claims 2,5-7,13-16,21-22,32,34,36**, the claims are newly objected to due Applicant's amendment to the independent claims which introduced the errors into the respective dependent claims.

#### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phallaka Kik whose telephone number is 571-272-1895. The examiner can normally be reached on Monday-Friday, 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on 571-272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2825

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**Any response to this action should be mailed to:**

Commissioner for Patents

P. O. Box 1450

Alexandria, VA 22313-1450

**or faxed to:**

571-273-8300



Phallaka Kik  
Primary Examiner  
April 10, 2007